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About 50 Attend June's Summer Tour of Urban Water and Natural Resources Challenges

by **Steve Ress**
UNL Water Center

A very full bus of about 50 toured urban water and natural resources management projects between Omaha and Kansas City when the 2001 summer tour hit the road in mid-June.

The tour followed its usual three-day, two-night format, but planners shifted dates to mid-June to try and take advantage of cooler, early summer weather. Next summer's tour will likely shift back to July.

"We had somewhat lower participation this year and that may have been due, in part, to the earlier dates since we left when a number of our participants were still in the field or were getting ready to irrigate crops," said tour co-organizer Steve Ress, UNL Water Center.

Still, those on the tour seemed to like what they saw.

"We took a closer look at urban issues than is the norm and we saw some very unique projects and partnerships effecting positive changes that a lot of people really aren't aware of, despite the fact that they're in our own backyard," Ress said.

First up were recreation, wildlife habitat, residential development and flood control projects in the Omaha-based Papio-Missouri River NRD.

Among the most popular of those were rolling tours of the U.S. Fish and Wildlife Service's Boyer Chute National Wildlife Refuge, a constructed riverine habitat

restoration project near Ft. Calhoun, as well as an upscale residential development near Bennington that is part of a dam and flood control project.

"A former side-channel was opened at the upstream end, creating a protected habitat and slow water movement for wildlife," said tour co-organizer Mike Jess, UNL Conservation and Survey Division of the Boyer Chute project, developed by the NRD.

Papio-Missouri NRD Manager Steve Oltmans detailed residential and dam site development near Bennington, a unique public and private partnering venture.



Tom Kimes talks to June Water Tour participants about Kansas City's Brush Creek project. (Photo: Steve Ress)

Lunch that first day was served on the Missouri River, aboard the *River City Star*. That was after an explanation of a "Brown field" cleanup project on the site of the former Asarco smelting and metal fabrication plant bordering the Missouri River at downtown Omaha.

"The project is interesting in that rather than excavating and incinerating toxic and hazardous residues

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Water Tour A Success; Visiting Professor Program

from the DIRECTOR



Kyle D. Hoagland

The annual Water and Natural Resources Tour, which focused primarily on urban water and resource management projects in the Omaha and Kansas City areas in June, was excellent in my estimation. Admittedly it was my first such tour, so I don't have much to compare it to, but the trip ran very smoothly and was extremely interesting. Presenters at each of the many stops and along the way were well prepared, hospitable, and ready for us to descend upon them. Steve Oltmans, General Manager of the Papio-Missouri River NRD, and Glenn Johnson, General Manager of the Lower Platte South NRD contributed significantly to the tour's success.

I won't reiterate all the stops and information that we received, but suffice it to say that this year's theme of the Missouri River and urban water issues was obviously timely and well thought out by the organizing team. Thanks are especially due Mike Jess for narrating the tour; Steve Ress for co-organizing the tour with Mike; Roger Jasnoch and Jessica Lacey of the Kearney Chamber; Don Schepler of CNPPID and Frank Kwapnioski of NPPD for all of their assistance and support before and during the event.

The tour has certainly become a joint effort over the years being co-sponsored by the Kearney Area Chamber of Commerce, Gateway Farm Expo, Central Nebraska Public Power and Irrigation District,

Nebraska Association of Resources Districts, Nebraska Public Power District, Nebraska Water Conference Council, Papio-Missouri River NRD and UNL's Institute of Agriculture and Natural Resources, Conservation and Survey Division and the Water Center. This is precisely the kind of partnering that keeps programs like the water tour fresh and interesting from year-to-year and make them reasonable in cost to our participants.

Preliminary plans are already underway for next year's tour and beyond. Among the locations receiving strong consideration for a June or July tour in 2002 is the North Platte River Basin in Wyoming, including the relatively remote and beautiful Pathfinder Reservoir. We also have

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Over the Hill? Water Center Director Kyle Hoagland turned 50 since the last Water Current went to press. We celebrated by "blackening" his office (photo: Tricia Liedle).

WATER CURRENT

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Meet the Faculty

Dr. Anatoly A. Gitelson

Physicist and remote sensing specialist. Professor in the UNL School of Natural Resource Sciences and affiliated with the UNL Conservation and Survey Division and Department of Geosciences.

Education:

Ph.D., The Institute of Radio Technology, Taganrog, USSR, 1972
MS, The Institute of Radio Technology, Taganrog, USSR, 1967

Current Research:

Focus is on the development models and remote sensing techniques for monitoring of terrestrial and aquatic environments, including water quality monitoring and its use in lake classification in Nebraska.

Teaching:

Quantitative Remote Sensing of Aquatic and Terrestrial Ecosystems.

Selected Publications:

- Gitelson, A.A., Y.A. Grits, D. Etzion, Z. Ning and A. Richmond, 2000. Optical properties of Nannochloropsis sp and their application to remote estimation of cell mass, *Bioengineering and Biotechnology*, N. 5, 69:516-525.
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Anatoly A. Gitelson

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(continued on page 9)

Dr. James S. Schepers

Soil Scientist, U.S. Department of Agriculture Agricultural Research Service (USDA-ARS), Research Leader and Supervisory Soil Scientist. Adjunct Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln. Member of Department of Agronomy and Horticulture since 1975. Primary focus of ARS research is in developing management practices to pro-



James S. Schepers

tect ground and surface water from contamination by nitrogen, phosphorus and manure-borne pathogens. Specific projects relate to using remote sensing to better define spatial variability of field, spatial application of fertilizer and manure, and practices to minimize nutrient losses through leaching and runoff.

Education:

Ph.D., Soil Physical Chemistry, University of Illinois, Urbana, IL., 1973.
M.S., Soil chemistry, University of Nebraska-Lincoln, 1970.
B.S., Agricultural Honors, University of Nebraska-Lincoln, 1968.

Recent Research:

Management Systems Evaluation Area (MSEA) Project: Presidential Water Quality Project, 1990-1996.

Variable Rate Application Technology Grant: U.S. EPA, 1994-1996.

Biofuels from Corn Stalks: U.S. Department of Energy, 1999-2000.

Publications:

- Raun, W.R., J.B. Solie, M.L. Stone, G.V. Johnson, E.V. Lukina, W.E. Thomason and J.S. Schepers, 2000. In-season prediction of yield potential using wheat canopy reflectance. *Agron. J.* (in press).
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Inventorying Nebraska's Irrigation Acres

Nebraska has more than seven million acres of irrigated, cultivated cropland, according to the U.S. Department of Agriculture's 1997 National Resources Inventory

Only two other states, California and Texas, have more irrigated acres, and Texas has been experiencing a steady decline in irrigated acres over the past quarter century.

With much of the state lying over the Ogallala Aquifer, one of the premier sources of U.S. groundwater, Nebraska has a valuable irrigation endowment, according to University of Nebraska agricultural economist Bruce Johnson.

"While the economic significance of these irrigation assets to the state's economy seems obvious, it is somewhat surprising to find no clear consensus as to how many acres are really under irrigation," Johnson said, "Nor has there been any definitive information on the acreage distribution by type of irrigation system.



The 1997 Census of Agriculture, a source used extensively for benchmark analysis of the agricultural production sector down to the county level, indicates Nebraska has a total of 6.94 million acres of irrigated land; while the Nebraska Agricultural Statistics Service estimates a total of 8.1 million acres that have wells or ditch water available and could be irrigated if conditions warrant.

Finally, the USDA's 1997 National Resource Inventory, which classifies the acreage base across all states, places Nebraska's cultivated cropland at 7.42 million acres with an additional 352,000 acres of non-cultivated irrigated cropland, such as irrigated forage production).

"So which of these data bases is the most accurate and what is a reliable estimate of Nebraska's irrigated acreage; how is this acreage distributed across Nebraska counties and how is the acreage distributed across the various types of irrigation being used," Johnson questioned in compiling his inventory of Nebraska's irrigated acres.

"Our method began with the Nebraska Department of Revenue's county-level totals of privately-owned irrigation acreage on the property tax roles for the 1999-2000 assessment year," he said.

To this was added estimates of publicly-owned irrigation acreage not on the tax roles from the Nebraska Board of Educational Lands and Funds and UNL.

When combined, Nebraska's irrigated acreage totals nearly 7.4 million acres distributed across the eight agricultural districts as noted in Table 1. County-level acreage statistics will be published in the upcoming 2000-2001 Nebraska Farm Market Developments report, Johnson said. This irrigated acreage amount represents one third of the State's cropland acreage.

The report can be accessed online at <http://agecon.unl.edu/realestate/re2001.pdf>.

"Once we arrived at what we believe to be a reliable benchmark estimate of total irrigated cropland, the next task was to identify distribution of that acreage by the type of irrigation system being," Johnson said, "More specifically, we wanted to estimate the extent of center pivot technology being used and the acreage that it represented."

This technology, invented in Nebraska and developed over the past half century, has transformed irrigated agriculture worldwide.

"Not only has it opened up lands which would otherwise not be irrigable, but it has also greatly enhanced water use and other input efficiencies on land that was previously gravity irrigated. As a result, thousands of Nebraska's irrigated acres are being converted each year to center pivot systems," Johnson said.

But detailed acreage statistics on acres irrigated by center pivot systems are not available.

"We relied upon the UNL's Conservation and Survey Division's satellite imagery of the State which reveals the center pivot circles in graphic detail. Using the satellite map for 1997, the latest one available, we were able to develop county-level center pivot acreage estimates. These were reconciled against our previously-developed irrigated acreage totals, and the final center pivot acreage estimates were made, he said.

Table 1 shows that center pivot irrigation is the primary system being used in Nebraska, accounting for more than 4.6 million acres and approaching two-thirds of the irrigated land base. Twenty five years ago, that amount was only one third.

If conversion of gravity irrigated land to center pivot continues at the rate of recent years, as well as some dryland cropland being developed with center pivot technology, as much as 70 percent of Nebraska's irrigated acreage could be under center pivot systems by 2010, Johnson estimated.

"The implications of that are for much more than state's bragging rights. Our irrigated land base represents a vital resource that will increasingly become the

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Taking a Look at TMDLs in Nebraska

by Patrick O'Brien
Nebraska Department of Environmental Quality

T-M-D-L. These 4 letters have been the focus of quite a bit of controversy the past few years. Typical of most conflicts there are several opinions as to what exactly TMDLs are and in some arenas have been thought to just be an acronym for Too Many Darn Lawyers. Amidst all the confusion and rumors, stands the Clean Water Act that has contained the Total Maximum Daily Load regulations in Section 303(d) since its inception in 1972.

What exactly is a total maximum daily load? The definition describes it as the maximum amount of a pollutant a waterbody (lake, stream or wetland) can receive from point sources (wastewater treatment facilities), nonpoint sources (agriculture or construction site runoff) and natural sources (wildlife, soils) and still meet the appropriate water quality criteria or goal. Once the daily load is determined, an allocation scheme and implementation plan, to reduce the loading back to the allowed level is also developed. Once complete, EPA must either approve or disapprove the TMDL. It should be noted that TMDLs are only required for waters that have been determined to not meeting state water quality standards and have been placed on the State's 303(d) list of impaired waters. Nebraska has identified 114 waterbodies on the most current (1998) 303(d) list.

So why have TMDLs been moved into the spotlight of the water quality stage? There are several answers to that question with litigation actions being one of the driving forces. On one side, citizen suits are being filed against EPA based on the perception that the Clean Water Act's TMDL provisions aren't being upheld. On the other side, some interest groups are filing suits in attempts to block the identification of impaired waters and the implementation of TMDLs. EPA and the State Resource agencies tend to be caught in the middle. At last count, 37 states have had at least one, if not multiple TMDL lawsuits filed, and fortunately Nebraska is not one of these.

With all this legal maneuvering taking place EPA decided the time was right to take a look at the TMDL program. Following the assemblage of a federal advisory committee and receipt of the committees recommendations, EPA proposed what some consider sweeping changes to the TMDL regulations. These changes included the identification of 11 key elements that each TMDL must contain (up from 4). Also, probably the most controversial of these new elements was

the requirement for the inclusion of an implementation plan that could be used as a component of approval or disapproval. The regulations, located in the 40 Code of Federal Regulations, Part 130, were made available for public comment from August 1999 to January 2000.

About the same time the regulations were being reviewed by the public, Congress began to question not only the proposed regulations, but also the TMDL program as whole. This interest peaked when an order was passed in an attempt to block the proposed regulations until a National Academy of Sciences Study on TMDLs could be completed. Former President Clinton signed the regulations despite the congressional efforts to postpone the rule-making process. Due to the congressional action, the effective date of the new TMDL regulations is 10/31/01.

So why have TMDLs been moved into the spotlight of the water quality stage? There are several answers to that question.

The impacts to Nebraska remain to be seen, but the changes are anticipated to be minor. On a large scale the Department will continue to address water quality problems using regulatory approaches for point source discharges and non-regulatory approaches to deal with nonpoint source pollution. No new regulations have been proposed; rather existing programs will be the basis for establishing and implementing the TMDLs. As well, the Department to the extent possible will remain focused on collecting the necessary data to accurately identify water quality problems and correct those problems using a bottom up approach. In other words the Department seeks local solutions for local problems.

With the advance of the internet much information can be acquired in a relatively short amount of time and the EPA TMDL web site can be a good starting point to pursue information on TMDLs. The web site is located at <http://www.epa.gov/OWOW/TMDL>. For State TMDL issues, check out the NDEQ's homepage at <http://www.deq.state.ne.us>.



Mike Jess and Glenn Johnson (center and left) display an aerial photograph of the former Asarco Co. "Brown field" clean-up project on the Missouri River at downtown Omaha.



Merwyn and Pat French read some historical notes about the Lewis and Clark expedition at Boyer Chute habitat restoration area north of Omaha. The historic exploration encamped near the site nearly 200 years ago.

2001 Summer



Papio-Missouri River NRD Manager Steve Oltmans addresses tour participants in Omaha.



Tour participants examine water purification and delivery facilities at Johnson County Water District No. 1, north of Kansas City metro area.

Photos by Steve Ress



Waiting to fill-out room registrations at Arbor Day Farm's Lied Conference Center in Nebraska City.



(From left) John Turnbull, Upper Big Blue NRD Manager; Don Schepler, Central Nebraska Public Power and Irrigation District Irrigation Division Manager; and Stan Staab, Lower Elkhorn NRD Manager wait for steaks off the grill at Arbor Day Farm in Nebraska City.

Water & Natural Resources Tour



Roger Jasnoch of the Kearney Area Chamber of Commerce, found some real wildlife in the heart of Kansas City's County Club Plaza area in the form of this adult Snapping Turtle along Brush Creek.



Nebraska Public Power District's Joel Sita addresses Missouri River water concerns at NPPD's Cooper Nuclear Station, near Brownville.

“Resource Management in Urban Areas”

From the Director (continued from page 2)

not given-up on the idea of returning (at least every so often) to a longer tour format in the coming years, perhaps as early as 2003. Several locations throughout the U.S. are being considered by our tour planners for a five to seven-day tour. Perhaps something along the lines of the tours Les Sheffield and Mike Jess helped organize years ago.

In other developments, look for an announcement soon on our web site for a new Visiting Assistant Professor Program in Water Science at UNL. This program is designed to bring in energetic young water scientists who recently received their Ph.D. and involve them directly in both research and teaching.

The immediate and broad range of experiences they will receive will

help them continue their career in academics or in another chosen disciplines, as well as enhance research and teaching in the water sciences at UNL. In other words, a "Win-win" situation, to use the phrase.

There is a wealth of new talent in a wide range of areas under the water science umbrella, and it is our hope that this program will effectively tap into that wealth and create some lasting interactions. We plan to advertise this program nationally and internationally beginning this fall in preparation for the 2002-03 academic year.

I am currently team-teaching a course in aquatic botany at Cedar Point Biological Station, just north of Ogallala, on Lake Ogallala (see the cover story in the last issue of the

Water Current). Now that I'm knee deep in mud and cold spring water on a regular basis, I am again reminded of the tremendous breadth of water resources in this state. You may not have ever seen the headwaters of a spring-fed stream in the Sand Hills, a windmill-driven cattle tank teeming with life in the midst of a drought, or a lake so alkaline that only brine fly larvae and some unusual algae can survive there, but it's all here within a day's drive or even just down the path.

We have a lot to learn, protect, and admire. And there are also the signs that read "Danger, falling dirt" and "Please do not park combines in parking lot." A great place to teach a summer course!

About 50 Attend June's Summer Tour of Urban Water and Natural Resources Challenges (continued from page 1)

left by the former industries, much of the site is encased with impervious materials, leaving it available for further use and development," Jess said.

First up on the second day was Nebraska Public Power District's Cooper Nuclear Station near Brownville. Discussions there shifted to potential economic and environmental impacts to the Missouri River and the U.S. Army Corps of Engineers' proposed Master Manual, specifying control of river flows.

Kansas City's first stop was for lunch and presentations at U.S. Environmental Protection Agency, Region 7. The group then journeyed to Water District No. 1 of Johnson County, where challenges to municipal water quality, quantity and delivery for the growing Kansas City metro area were examined, along with tours of the district's plant, laboratories and other facilities.

On Wednesday, Tom Kimes and associates from the Kansas City Public Works Department and from the Corps of Engineers put participants on city buses for a guided tour of the Brush Creek flood control and transportation corridor that runs through many commercial, industrial and residential sections of the city, including the Country Club Plaza.

The project, under planning and development since the late 1970's, was a model for Lincoln's proposed Antelope Valley project.

Tour sponsors were Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, Kearney Area Chamber of Commerce, Gateway Farm Expo, Nebraska Association of Resources Districts, the Papio-Missouri River NRD, UNL's Institute of Agriculture and Natural

Resources and the Nebraska Water Conference Council.

Planning for 2002 and 2003 water and natural resource tours began earlier this month. Though early in the planning process, it is likely that next year's tour will return to July dates and possibly visit western Nebraska and eastern Wyoming. There is a possibility that the 2003 tour could go out of the area. Planning updates will be in upcoming issues of the *Water Current*.

We're Updating!!

We are updating our mailing list. If you have a change of address, title and/or name, or would like to have your name added to or removed from the *Water Current* mailing list, please let us know. Also, if you know of anyone who might be interested in receiving our publications, please give us their names and we will be glad to add them to our mailing list.

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Meet the Faculty

Dr. Anatoly A. Gitelson (continued from page 3)

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- Web/email address:**
gitelson@calmit.unl.edu

Dr. James S. Schepers (continued from page 3)

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Inventorying Nebraska's Irrigation Acres (continued from page 4)

envy of a water-deficit world. Moreover, the fact that the bulk of that acreage is using a form of technology that is water efficient and

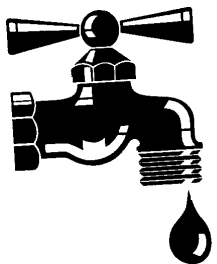
complementary to precision agriculture, we can be more assured of its sustainability into the future," he said.

Johnson's inventory was compiled with help from UNL undergraduate student assistants Peter Brummels and Lance Kuenning.

Nebraska's Irrigated Cropland Acreage by Statistical District, 2000

Ag Statistics District	Total Cropland	Total Irrigated Cropland	Irrigated Cropland as a percent of Total Cropland	Center Pivot Irrigated	Other Irrigated	Center Pivot as percent of total percent
	— 1,000 acres —		Percent	— 1,000 acres —		percent
Northwest	3,013	709	23.5	422	287	59.5
North	2,033	537	26.4	520	17	96.8
Northeast	3,390	877	25.9	776	101	88.5
Central	2,144	1,210	56.4	535	675	44.2
East	4,034	1,463	36.3	784	679	53.6
Southwest	2,568	924	36.0	738	186	79.9
South	1,857	897	48.3	399	498	44.5
Southeast	3,054	766	25.1	433	333	56.5
State*	22,093	7,382	33.4	4,608	2,774	62.4

*May not add to totals due to rounding.



Water News Briefs

Free Tabloids

Copies of *Wetlands-Understanding a Resource* (1997) and *Drinking Water-Understanding a Resource* (1999) are available free from the UNL Water Center.

Organizations wanting copies for educational use or general distribution can have up to several hundred copies of either or both publications at no, providing they make arrangements to pick them up from our UNL East Campus offices. If you need copies shipped to you, we will only ask that you pay the actual costs of shipping/ mailing.

If you want copies of either or both tabloid, call the Water Center at (402)472-3305 or email sress1@unl.edu. For a list of other free publications available through the Water Center, access us online at <http://watercenter.unl.edu>.

Ogallala Aquifer Book

University of Nebraska Press has published the second edition of *Ogallala-Water for a Dry Land*. The book was written by John Opie, a historian at the New Jersey Institute of Technology.

The book provides an environmental history of the Ogallala aquifer and farming in the Great Plains region. It addresses the impact of the 1996 Farm Bill (Federal Agricultural Improvement and Reform Act) on agriculture and water use and examines the recent movement of industrial hog farming into the region.

The book also covers such issues as early exploration of water in the region, impact of the Dust Bowl on groundwater supplies and farming activity and the impact of center pivot irrigation on the region. Case studies of five water districts are presented.

For more details, visit the University of Nebraska press web site at <http://www.nebraskapress.unl.edu>.

WEFTEC 2002

The Water Environmental Federation (WEF) is accepting abstracts of papers to be considered for presentation at "WEFTEC 2002," WEF's 75th annual conference, Sept. 28 through Oct. 2, 2002 in Chicago, IL.

Abstracts must be received by Dec. 3, 2001.

The conference is seeking abstracts for papers in a variety of areas, including: industrial issues and treatment technology; municipal wastewater treatment process; residuals and biosolids management; collection systems, surface water quality and ecology; utility management, remediation of soil and groundwater; water reclamation and reuse; public education; management of odors and VOCs; computer applications and instrumentation; small community and natural treatment systems; plant operations and maintenance; disinfection; privatization/ public-private partnerships/creative financing; and international issues.

For complete abstract submittal instructions, contact the WEF at (800)666-0206 or e-mail confinfo@wef.org.

12th Annual South Platte Forum

"Wassup in the South Platte Basin?"

The 12th Annual South Platte Forum will be held at the Raintree Plaza in Longmont, CO. Oct. 24-25.

Keynote speakers at the forum will be Russell George, Director of the Colorado Division of Wildlife and Colorado State Senator John Evans.

Scheduled topics include Water Banking; Making a deposit for the future; Well Augmentation: Balancing the account; What's in the Water? A water quality update; Chutes, Ramps and Ladders: A recreation quantity discussion; Fishable, Swimmable, Irrigatable: A recreation quality discussion; and Use less, Reuse More: saving water for tomorrow.

For information, or to register, contact Jennifer Brown, South Platte Forum, 513 N. Harding Ave., Johnstown, CO 80534, phone (970)213-1618 or email

southplatte@qwest.net. Information on the web is at <http://southplatteforum.colostate.edu>.

The forum is being sponsored by the Colorado Division of Wildlife, Colorado State University Cooperative Extension, Colorado Water Resources Research Institute, Denver water, Northern Colorado Water Conservancy District, U.S. EPA, U.S. Fish and Wildlife Service and U.S. Geological Survey.

Junk Mail

According to the Native Forest Network, the average American gets 1.5 personal letters each week, compared to 10.8 pieces of junk mail.

Over a year, a person could receive almost 560 pieces of junk mail.

There are ways to remove your name from those who solicit by mail. Consumers can call one of the following major national credit bureaus (they share lists) to have their names removed from mailing lists used for unsolicited credit and insurance offers:

Equifax, P.O. Box 740123, Atlanta, GA 30374-0123 or phone (888)567-8688.

Experian, 12606 Greenville, Ave, Dallas, TX 75243 or phone (800)353-0809.

TransUnion, 555 West Adams St., Chicago, IL 60661 or phone (800)680-7293.

You also can write to firms sending unsolicited material and tell them to stop. Be sure to use the enclosed business reply envelopes and address them to customer service. You can also call the firms' toll-free numbers and ask to speak with customer service.

(Editor's Note: From the Nebraska Environmental Trust's Resource newsletter, Vol. 40, June 2001).

Recycling on the Web

www.ega.org
www.globalstewards.org
www.edf.org
www.nativeforest.org
www.junkbusters.com
www.betterworld.com
www.recycle.net
www.responsibleshopper.org

AUGUST

4-9: Ecological Society of America annual meeting, Madison, WI: "Keeping all the parts: Preserving, Restoring and Sustaining Complex Ecosystems." Contact Nadine Lymn, 1707 H St., NW, Suite 400, Washington, D.C. 20006, phone (202)833-8773 or email nadine@esa.org.

6-8: Globalization and Water Management: The Changing Value of Water, Dundee, Scotland. For information, contact David W. Moody at (603)835-7900, email dwmoody@beaverwood.com or online at <http://www.awra.org>.

12-15: Seventh Annual Industrial Wastes and Regulatory Conference, Charleston, SC. For information, contact Erin Stewart at the Water Environment Federation at (703)684-2492 or on the web at www.wef.org.

26-30: American Chemical Society fall annual meeting, Chicago, IL. Contact Charmayne March, 1155 16th St., NW, Washington, D.C. 20036, phone (202)872-4445 or email y_marsch@acs.org.

27-29: Marine Protected Areas: Design and Implementation for Conservation and Fisheries restoration, Woods Hole, MA. Contact ellen Bailey, MS #32, Woods Hole Oceanographic Institution, Woods Hole, MA 02543, phone (508)289-2308 or email ebailey@whoi.edu.

SEPTEMBER

5-6: Wetlands and Remediation Conference, Burlington, VT. Contact Karl Nehring, Battelle, 505 King Ave., Columbus, OH 43201, phone (614)424-6510 or email nehringk@battelle.org.

11-14: Covering Water - H2WOes in the 21st Century, St. Petersburg, FL. Contact Kristen M. Kusek at (727)553-1638 or email kkusek@seas.marine.usf.edu.

12-15: 2001 Arizona Hydrological Society Symposium, Presidio Plaza Hotel, Tucson, AZ. For information, contact Steve Brooks at (520)888-8818, email sbrooks@golder.com or online at www.AzHydroSoc.org.

13-17: Forestry at the Great Divide, Society of American Foresters National Convention, Denver, CO. Contact Society of American foresters, 5400 Grosvenor Lane, Bethesda, MD 20814, phone (301)897-8720 or email safweb@safnet.org. On the web at <http://www.safnet.org>.

16-18: Plant Operations and Maintenance of Small and Medium Wastewater Treatment Plants, Cincinnati, OH. For information, contact Erin Stewart at the Water Environment Federation at (703)684-2492.

17-21: Fifth Biomass Conference of the Americas, Orlando, FL. Contact Dee Scheaffer at the National Renewable Energy Laboratory at (321)638-1527 or online at <http://www.nrel.gov/bioam>.

18-19: Effective Risk Management of Endocrine Disrupting Chemicals, Cincinnati, OH. Contact Lisa Mahoney at the U.S. EPA at (703)676-7967.

20-22: Greening of the Campus: Moving to the Mainstream, Muncie, IN. Using the campus as a teaching tool in sustainability. Contact Becky Amato, University College NQ323, Ball state University, Muncie, IN



47306-0220, phone (765)285-2385 or email bamato@bsu.edu. On the web at <http://www.bsu.edu/greening>.

24-25: Southeast FOCUS Ground Water Conference, Sheraton Atlanta Hotel, Atlanta, GA. Sponsored by the National Groundwater Association. Regional groundwater issues. For information, phone (800)551-7379 or access the conference online at www.ngwa.org.

25-29: Annual Meeting of the Wildlife Society, Reno, NV. Wildlife toxicology issues. Contact Steve Sheffield, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, 4401 N. Fairfax Dr., Ste 634, Arlington, VA 22203, phone (703)358-1821 or email steven_r_sheffield@fsws.gov. On the web at <http://www.wildlife.org/2001.html>.

OCTOBER

1-4: International Conference on Aquatic Invasive Species, Alexandria, VA. Phone (800)868-8776 or online at <http://www.aquatic-invasive-species-conference.org>.

9-11: Pharmaceuticals and Endocrine Disrupting Chemicals in Water, Minneapolis, MN. Sponsored by the National Ground Water Association. Contact Bob Masters, NGWA, 601 Dempsey Rd., Westerville, OH 43081, phone (800)551-7379 or email rmaste@ngwa.org.

10-12: International Conference on Remediation of Contaminated Sediments, Venice, Italy. Contact marco Pellei via email to sedimentscon@battelle.org or online at <http://www.battelle.org>.

13-17: WEFTEC 2001: Water Environment Federation's 74th Annual Conference and Exposition, Atlanta, GA. For information, contact Erin Stewart at the Water Environment Federation at (703)684-2492 or on the web at www.wef.org.

14-18: Optimizing Nitrogen Management in Food and Energy Production and Environmental Protection, Potomac, MD. Contact Rhonda Kranz, Ecological Society of America, 1707 H St., NW, Suite 400, Washington, D.C. 20006, phone (202)833-8773 or email N2001@esa.org.

14-18: International Nitrogen Conference, Potomac, MD. Sponsored by the Ecological Society of America. Contact Alison Gillespie, Ecological Society of America, 1707 H St., NW, Washington, D.C. 20006, phone (202)833-8773 (ext. 211) or email

alison@esa.org. On the web at <http://esa.sdsc.edu/n2001>.

17-19: National Urban Watershed Conference, Costa Mesa, CA. Examining what is known about the dynamics of urban watersheds and their role in human health. Contact National Water Research Institute, P.O. Box 20865, Fountain Valley, CA 92728-0865, phone (714)378-3278 or email nwri-2@worldnet.att.net.

22-25: International Conference on Contaminated Soils, Sediments and Water, Amherst, MA. Contact Denise Leonard, Environmental Health Sciences, N344 Morrill, University of Massachusetts, Amherst, MA 01003, phone (413)545-1239 or email dleonard@schoolph.umass.edu.

24-25: The 12th Annual South Platte Forum, Raintree Plaza, Longmont, CO. For information, contact Jennifer Brown at (970)213-1618, email southplatte@qwest.net or <http://southplatteforum.colostate.edu>.

NOVEMBER

5-7: 46th annual New Mexico Water Conference: New Mexico Watershed Management: restoration, Utilization and Protection, La Fonda, Santa Fe, NM. For registration information, phone (505)646-4337 or email wrri@wrri.nmsu.edu.

6-7: The Practice of Restoring Native Ecosystems National Conference, Arbor Day Farm Lied Conference, Nebraska City, NE. For information, or to register, phone (402)474-5655 or register online at arborday.org/RNEconference.

12-15: American Water Resources Association Annual Water Resources Conference, Albuquerque, NM. For information, contact the AWRAZ at (540)687-8390, email info@awra.org or www.awra.org

14-16: 2001 Groundwater Foundation Fall Conference and Groundwater Guardian Designation, Hilton Pittsburgh and Towers Hotel, Pittsburgh, PA. Questions and registration information can be had from Cindy Kreifels at (800)858-4844, (402)434-2740 (in Lincoln) or via email to cindy@groundwater.org.

27-Dec. 1: Second National Conference on Pesticide Stewardship, Marriott, Memphis, TN. Sponsored by the National Pesticide Stewardship Alliance. For information contact Kathy Brooks at (877)920-6772 or email kbrooks@arrowchase.com.

Water Quality Funding Measure Passes

By Roy Frederick
Public Policy Specialist
UNL Department of Agricultural Economics

Ask any thoughtful Nebraskan to name the top public policy issues in the state, and water quality will surely be near the top of the list. Perhaps it's exceeded only by property taxes.

Ironically, the two concerns tended to work at cross-purposes with each other in the just-completed session of the Nebraska Legislature.

Last year, a tax on fertilizer sales in Nebraska was allowed to expire. This money had been used to fund water quality projects through the state's natural resource districts. The NRDs were required to provide a 25 percent match on these funds. Altogether, about \$2.5 million annually went to water quality projects under this program.

Early in this year's session, legislators proposed continuing the water quality programs, but making the NRDs, themselves, mostly responsible for funding. This surely would have meant higher property taxes because, as local units of government, NRDs have few alternatives.

Some senators doubted whether the NRDs would, in fact, tax themselves to meet the water-quality objective. Thus, a scramble began to find alternative funding sources. Perhaps not surprisingly, legislators eventually reached a compromise to spread the financial pain.

Legislative Bill 329 creates a Natural Resources Water Quality Fund. It will be administered by the state Department of Natural Resources. One million dollars will come from the Pesticide Administrative Cash Fund and \$250,000 from the state's general fund in each of the next two fiscal years. Importantly, however, NRDs receiving water quality funds will be required to provide a 150 percent match for state funds. Property taxes inevitably will enter the mix, even if at a lower level than originally proposed.

Moreover, it should surprise no one that the Pesticide Administrative Cash Fund will not come from money grown on trees. In part, it will be generated by fees on pesticides registered for use in the state. The other part will come from license fees on both commercial and private pesticide applicators. It seems inevitable that farmers and ranchers will pay indirectly for water quality when they buy and apply pesticides.

Is the allocation of fees and taxes for this water quality initiative fair? Answers vary, depending on one's perspective. Farms contribute to water-quality problems in certain cases. The degree of harm depends on amounts of fertilizers and pesticides applied, soil types and general management practices. However, water quality problems go well beyond agriculture.

Think about the acres of golf courses, parks and private yards in towns and cities across Nebraska. Increasingly, the cost of finding solutions to water-quality problems may need to be shared by all citizens.

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